# MANAGEMENT PROBLEMS AND OPPORTUNITIES

The management goals, objectives, and strategies for the Black River Watershed were developed using information collected for the Black River Watershed Inventory and Assessment and direction provided by the Southeast Regional Management Guidelines (MDC 1999), Missouri Department of Conservation Strategic Plan, and the Fisheries Division Five Year Strategic Plan. All goals are of equal importance, with objectives listed in prioritized order whenever possible. This plan includes only those activities and results that can reasonably be expected to be achieved or influenced by MDC during the next 25 years. Completion of these objectives will depend upon their status in overall regional and division priorities and the availability of human resources and funds.

GOAL I: Maintain or improve aquatic habitat conditions to meet the needs of native aquatic biota while accommodating society's demands for agricultural production and economic development.

Status: Aquatic habitats, riparian areas, and the watershed are mostly in good condition throughout the basin. However, land management can be improved both on public and private land.

**Objective 1**: Maintain, expand, and restore riparian corridors; enhance watershed management; improve in-stream habitat; and reduce streambank erosion throughout the basin.

#### Strategies

Provide technical assistance and recommendations about streams to all landowners, public agencies, and private contractors that request it.

Ensure that all MDC conservation areas are examples of good watershed, riparian corridor, and stream management by including appropriate recommendations and prescriptions in area plans.

Encourage and assist other government agencies to use proper watershed, riparian corridor, and stream management on their lands.

Improve landowner stream stewardship by promoting and implementing MDC's incentive programs.

Work with the Natural Resource Conservation Service, Farm Service Agency, and Soil and Water Conservation Districts to provide and promote landowner incentive programs that will improve watershed, riparian corridor, and stream stewardship (*e.g.* fencing, corridor tree planting, livestock watering systems, pond construction).

Promote and participate in SALT and EARTH projects so that appropriate practices are available to landowners to improve watershed, riparian corridor, and stream stewardship.

Review Section 404 and other permit applications, comment on anticipated adverse impacts, and recommend measures to protect watershed and aquatic environments.

Periodically monitor habitat conditions; methods may include, GIS technology, aerial photography, or helicopter reconnaissance.

**Objective 2**: In the channelized streams of the lower subbasin, reduce channel instability, sedimentation, and streambank sloughing and increase instream woody habitat.

#### Strategy

Encourage drainage districts and landowners to leave vegetated strips, preferably trees, along ditches and streams.

# GOAL II. Maintain or improve water quality throughout the basin so that it is sufficient to support diverse aquatic biota.

Status: Water quality is generally good throughout the basin. However, mines, tailing ponds, and waste water treatment facilities can degrade water quality. In addition, the effects of the AmerenUE hydropower facility on water quality and biota of the East Fork of the Black River and Lower Taum Sauk Lake unknown. This facility is operated under the auspices of the Federal Energy Regulatory Commission and the current license which expires in 2010. A new license is scheduled to be issued in 2010. The new license will be in effect for a minimum of 30 years.

**Objective 1**: Ensure that basin streams meet state water quality standards.

### Strategies

Review NPDES, Section 404, and other permit applications; assist with the enforcement of existing water quality laws; and recommend measures to protect aquatic communities.

Encourage Missouri Department of Natural Resources (MDNR) to implement best reclamation techniques for mines, tailing dams and ponds, and chat piles.

Oppose the establishment of landfills in areas that may contaminate basin streams. Cooperate with other state and federal agencies to investigate pollution events and fish kills.

Work with the Missouri Department of Health and MDNR to reduce contaminant levels in fish by collecting fish for contaminant analysis, advising the public about contaminants, and identifying sources of contamination.

Encourage and assist the MDNR to monitor construction sites to ensure that best management practices are used to limit erosion and sediment input into streams.

Encourage and assist other government agencies to use proper watershed, riparian corridor, and stream management practices on their lands.

Improve landowner stream stewardship by promoting and implementing MDC's incentive programs.

Work with the Natural Resource Conservation Service, Farm Service Agency, and Soil and Water Conservation Districts to provide and promote landowner incentive programs that will improve watershed, riparian corridor, and stream stewardship (e.g. fencing, corridor tree planting, livestock watering systems, pond construction).

Promote and participate in SALT and EARTH projects so that appropriate practices are available to landowners to improve watershed, riparian corridor, and stream stewardship.

Educate livestock producers by providing them with technical information about management practices (*e.g.* alternative watering systems, management intensive grazing) to keep livestock waste from entering streams..

**Objective 2**: Encourage the public to become advocates for high-quality water.

## Strategies

Encourage formation of additional STREAM TEAMs and STREAM TEAM associations within the basin.

Encourage STREAM TEAMs to participate in the Volunteer Water Quality Monitoring Program and to report pollution, other water quality problems, and illegal trash dumping to the proper authorities.

Encourage and assist STREAM TEAMs in removing trash from all major basin streams.

Use media contacts, presentations, special events, and literature distribution to reach people throughout the basin to enhance their awareness of water quality problems and viable solutions.

Serve in an advisory role to STREAM TEAMs and other citizen organizations and local governments on water resource issues.

**Objective 3**: Work with AmerenUE and other stakeholders to determine the impacts of the Taum Sauk hydropower facility on the aquatic resources and to develop mitigation measures which benefit natural resources and recreation.

## Strategies

Collect baseline data (*e.g.*, water quality, fish, macroinvertebrate, and physical habitat), which will be used during the relicensing process.

Participate in the FERC relicensing effort by attending stakeholder and subcommittee meetings.

Take the lead with other fish and wildlife and environmental agencies to work through the FERC relicensing effort. Develop conditions to the new license which will enhance, protect, and mitigate for aquatic resources.

Encourage Stream Teams and other stakeholders to adopt streams, especially downstream of Lower Taum Sauk Lake, to help with monitoring biota, water quality, and habitat.

# GOAL III. Maintain diversity of native aquatic organisms and improve the quality of fishing.

Status: The basin supports a diverse aquatic biota, including 132 fish species, 42 mussel species, and 12 crayfish species. Most streams support a diverse benthic invertebrate fauna.

**Objective 1**: Monitor, assess, and protect aquatic populations and communities.

### Strategies

Encourage STREAM TEAMs to participate in the Volunteer Water Quality Monitoring Program to monitor aquatic invertebrates and water quality.

Encourage and support Protection Division personnel with the protection of mussels from illegal harvest.

Maintain proper habitat conditions (*e.g.* improved water quality, reduced siltation) through improved watershed, riparian corridor, and streambank management.

**Objective 2**. Provide diverse, high-quality angling opportunities.

#### Strategies

Evaluate the status of the sport fish community by conducting periodic electrofishing surveys and tagging studies.

Propose and implement regulations or stock fish, as needed, that might improve the quality of fishing for a variety of species (e.g. paddlefish, smallmouth bass, spotted bass, shadow bass, walleye, channel catfish).

Identify critical habitat areas (e.g. nursery areas) for sportfish species and maintain or enhance these areas as needed.

Determine angler preferences through creel or angler opinion (mail-in or phone) surveys.

Determine the impacts of stocking walleye and paddlefish fingerlings in the Black River.

## **Objective 3**. Improve access to basin streams.

#### Strategies

Acquire and develop public access and frontage sites for boating, canoeing, and bank fishing at strategic points.

Improve bank fishing and other aquatic wildlife-based recreational opportunities on public lands.

# GOAL IV. Improve the public's knowledge and appreciation of stream resources; recreational opportunities; and proper watershed, riparian corridor, and streambank management.

Status: Public education will continue through a variety of avenues. Stream management workshops for landowners, classes for teachers, seminars at Sports Shows and other events, and contacts with the news media will provide a variety of means to educate the public.

**Objective 1**. Educate the public on the value of healthy stream ecosystems and encourage advocacy on behalf of basin streams.

#### Strategies

Assist with the University of Missouri's project, Sustaining Natural Resources on Private Lands in the Central Hardwood Region. This project will be conducted in the St. Francis River and Black River basins in Missouri.

Conduct aquatic education programs in cooperation with MDC Outreach and Education Division and local area schools.

Encourage basin STREAM TEAMs to promote the value and opportunities associated with basin streams.

Encourage formation of additional STREAM TEAMs and STREAM TEAM associations within the basin.

Provide technical assistance and recommendations about streams to all landowners, public agencies, and private contractors that request it.

Cooperate with other agencies to promote landowner participation in watershed and stream incentive programs and SALT or EARTH programs.

Work with MDC's Outreach and Education Division staff to conduct stream management workshops for school teachers.

Work with MDC's Private Land Services (PLS) staff to promote good stream stewardship through workshops and one-on-one contacts with landowners.

Work with PLS staff to present workshops and programs to local government officials about stream dynamics and the importance of good watershed management and healthy riparian corridors.

**Objective 2**. Educate the public about aquatic-related recreational opportunities in the basin.

# Strategies

Promote angling opportunities through MDC's Fishing Prospects, media, presentations, and special events.

Increase awareness of the angling opportunities for non-game fishes (e.g. buffalo, gar, carp, drum).

Promote aquatic-related activities (e.g. angling, snorkeling, canoeing, sight-seeing) through the media, presentations, and special events.